

CLAIMS:

1. A method for analyzing a data trace representative of an FC network, comprising:
 - determining a topology of the network;
 - filtering the data trace for open commands that are not perceived by at least one analyzer positioned in communication with the network and eliminating devices associated with these open commands not received by an analyzer from further analysis;
 - filtering the data trace for failed open commands and eliminating devices associated with the failed open commands from further analysis;
 - filtering the trace data for frames to destinations that are not received by the analyzer and eliminating devices associated with these frame from further analysis;
 - filtering frames transmitted when a loop is in closed state and eliminating devices associated with transmitting frames when a loop is closed from further analysis; and
 - conducting error analysis of the network topology not eliminated by a filtering step.
2. The method of claim 1, further comprising filtering conversations where the context cannot be determined by analyzer position.
3. The method of claim 1, further comprising determining what devices are validly communicating on the loop.
4. The method of claim 1, further comprising discarding FC-4 conversations that cannot be determined or monitored by the position of an analyzer in the network.
5. The method of claim 1, further comprising capturing the trace data from the network with at least one analyzer position in communication with the network.

6. The method of claim 1, further comprising determining a condition and state of the loop at any time via analysis of the trace data after the filtering steps.
7. A method for determining valid data states in a FC SAN during a network analysis process, comprising:
 - filtering conversations from a data trace when the context of the conversations cannot be determined;
 - determining what devices are validly communicating on the FC loop from the data trace;
 - filtering conversations from the data trace that cannot be monitored or determined from a current analyzer positioning;
 - tabulating validly communicating devices; and
 - analyzing the data trace using the tabulated validly communicating devices to determine FC network errors.
8. The method of claim 7, further comprising determining open commands in the data trace that are not viewed by a network analyzer and discarding data related to the determined commands from further analysis.
9. The method of claim 7, further comprising determining failed open commands in the data trace and discarding data related to the failed open commands from further analysis.
10. The method of claim 7, further comprising determining frames sent to destinations that were not received by the destination and discarding data related to these frames from further analysis.
11. The method of claim 7, further comprising determining frames sent during a loop closes state from the data trace and discarding data related to these frames from further analysis.

12. The method of claim 7, further comprising acquiring the trace data from at least one analyzer positioned in communication with the FC network.
13. The method of claim 7, further comprising determining the FC network topology using the tabulated validly communicating devices.
14. The method of claim 7, wherein analyzing the data trace further comprises discarding trace data not determined to be valid.
15. A method for filtering FC conversations in a network to determine valid topology and errors for the FC network, comprising:
 - acquiring a data trace from the FC network via at least one analyzer positioned in communication with the FC network, the data trace representing bidirectional data transmissions in the FC network;
 - filtering conversations from the data trace that are related to unverifiable network devices;
 - generating a network topology from the data trace containing the filtered conversations; and
 - analyzing the FC network for errors using the data trace containing the filtered conversations.
16. The method of claim 15, wherein filtering conversations comprises filtering FC2 conversations where the context of the conversation cannot be determined from the data trace.
17. The method of claim 15, wherein filtering conversations comprises filtering FC4 conversations where both sides of the conversation cannot be monitored from the positioning of the at least one analyzer.
18. The method of claim 15, wherein filtering conversations comprises:

determining open commands that are not captured by the at least one analyzer;

determining failed open commands;

determining frames sent to destinations that were not received; and

determining frames sent on a loop while the loop is in a closed state.

19. The method of claim 18, further comprising generating a modified data trace with only validly analyzable data therein, the validly analyzable data including the data trace with the determined commands and frames removed.

20. The method of claim 18, further comprising determining what devices are validly communicating on the FC network.